

Fig. 1

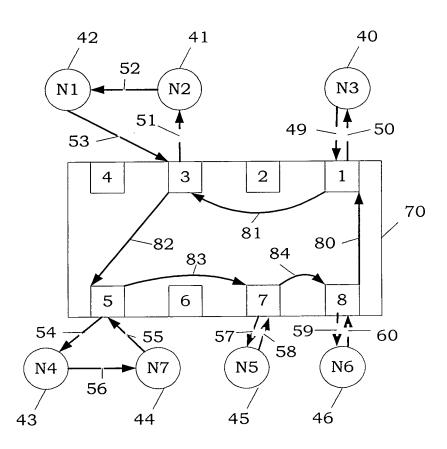
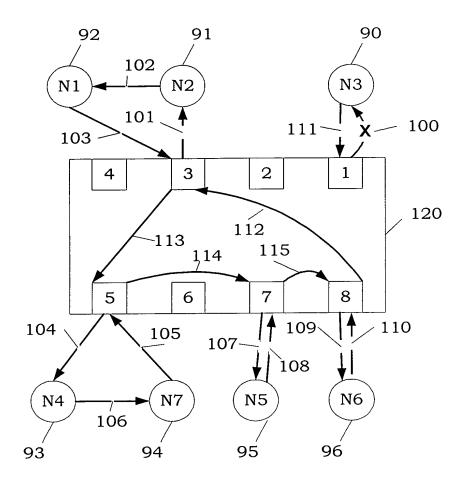


Fig. 2



Fibre Channel Arbitrated Loop Hub

Fig. 3

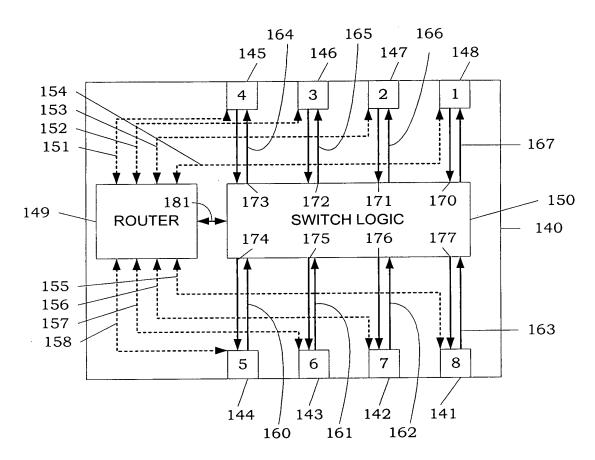


Fig. 4

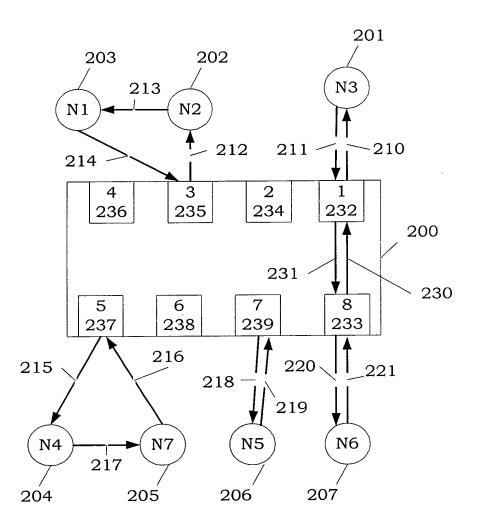


Fig. 5

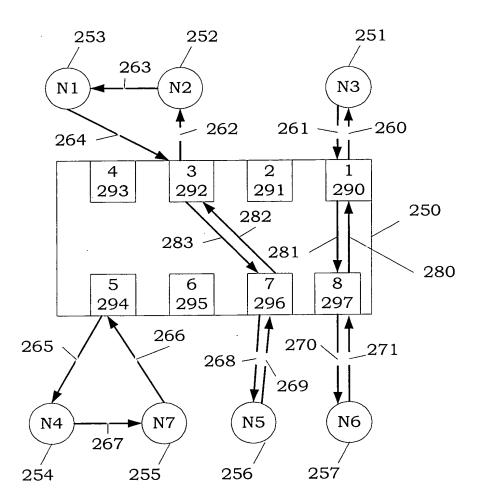
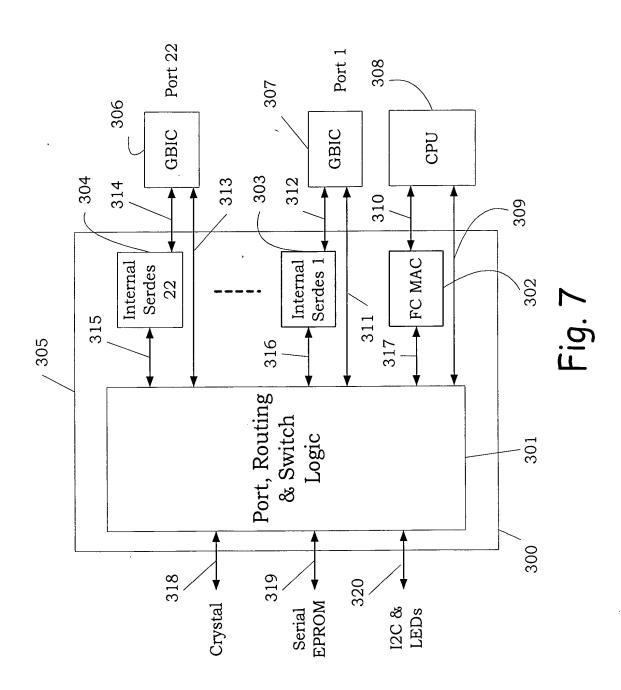


Fig. 6



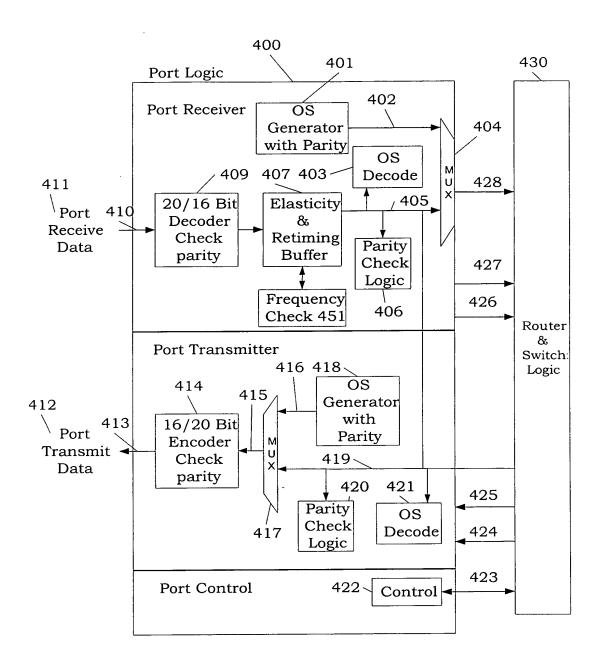


Fig. 8

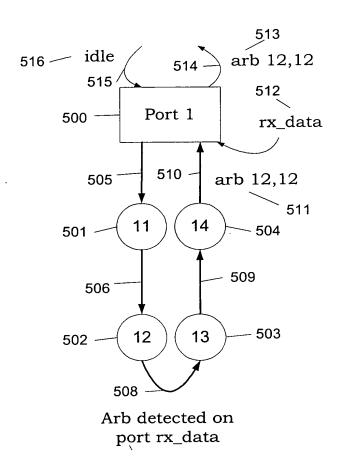
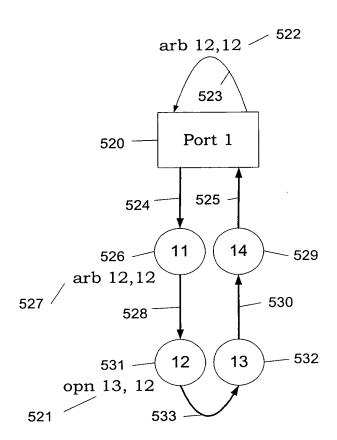


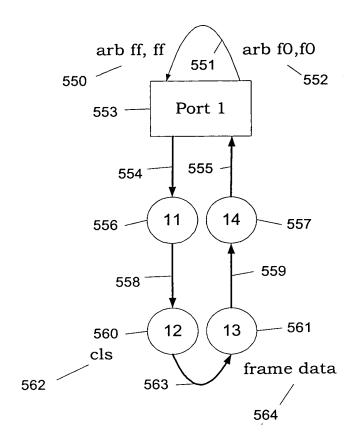
Fig 9a



Connection established.

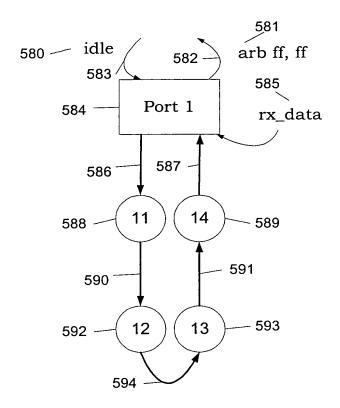
Open sourced

Fig 9b



Arbf0 replaced with Arbff. Data Transfered. Close sourced.

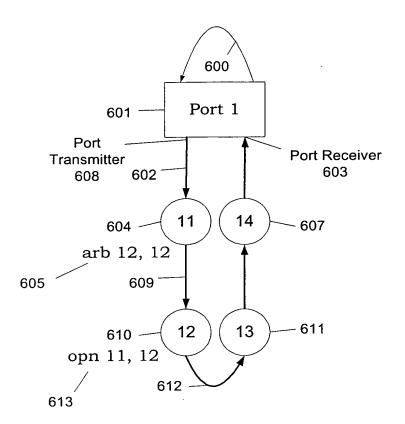
Fig 9c



Arbff detected on port rx_data.

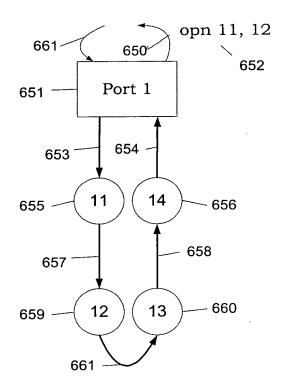
Disconnect. Source idles

Fig 9d



Arbs forwarded. Open sourced.

Fig 10a



Open detected at port receiver.

Port receiver holds open.

Provides ALPA to router and asserts opn_connect_req.

Fig 10b

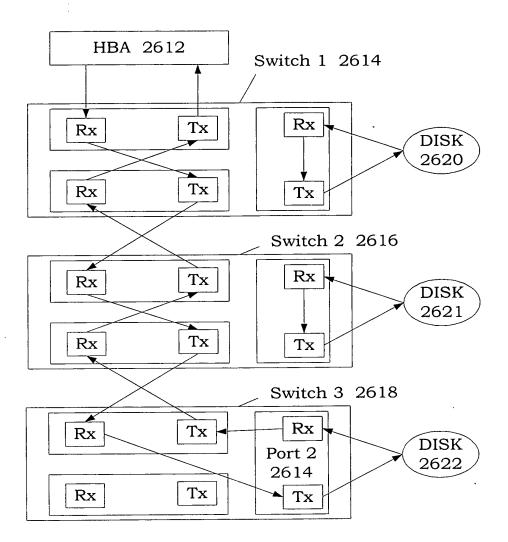


Fig. 34

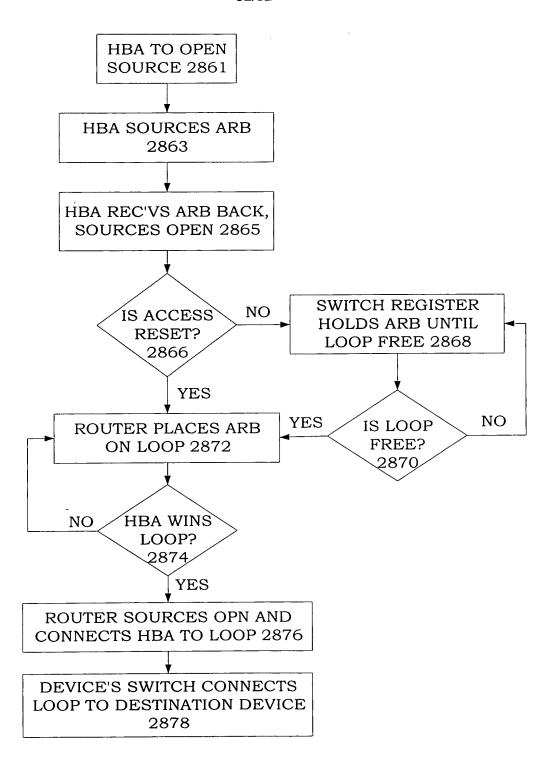


Fig. 35

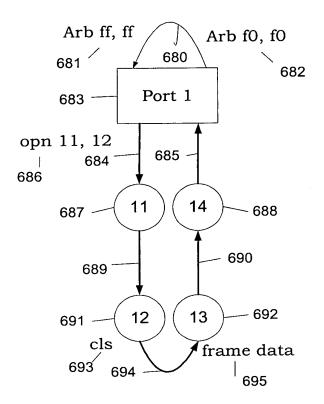
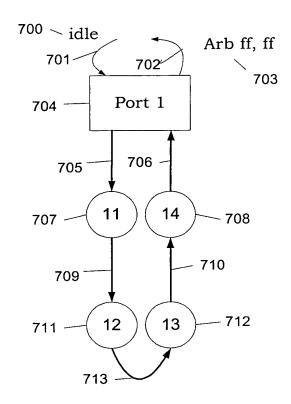
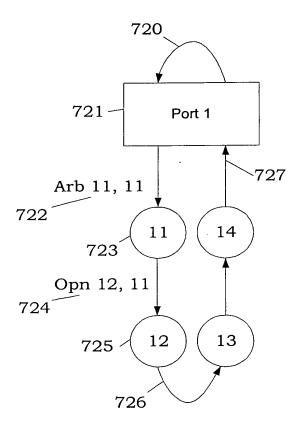


Fig 10c



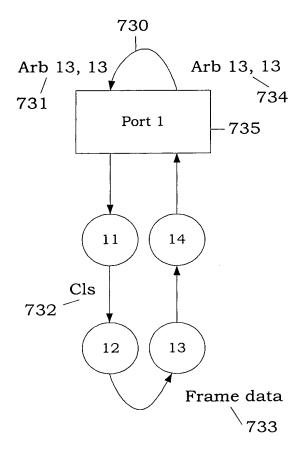
Arbff detected on port rx_data. Disconnect. Source idles.

Fig 10d



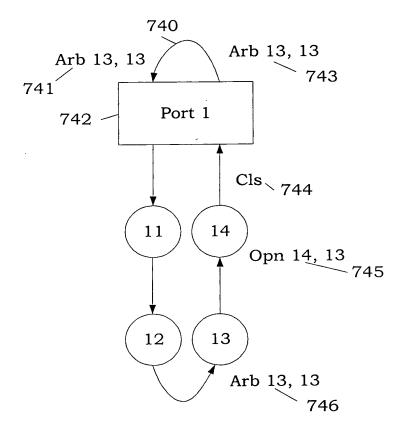
Arbs forwarded. Open Sourced.

Fig 11a



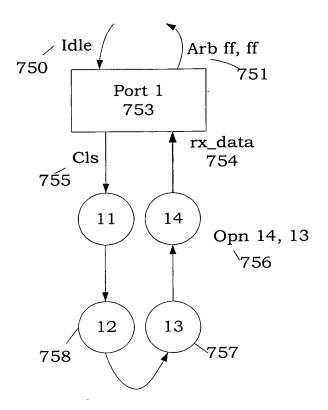
Arb 13 forwarded. Data Transfered. Close sourced.

Fig 11b



Close forwarded by node 12. Arb 13 received by node 13. Open sourced by node 13.

Fig 11c



Close source by node 13.
Forwarded by node 12.
Arb ff Detected on port rx_data.
Disconnect.
Source idles.

Fig 11d

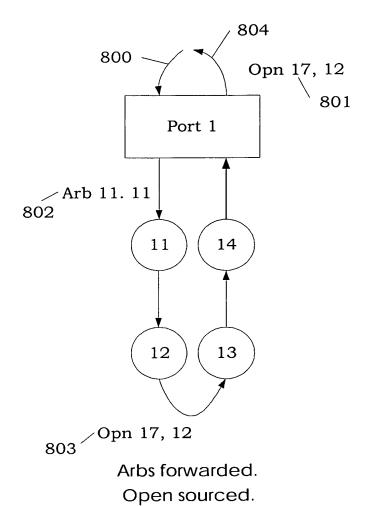
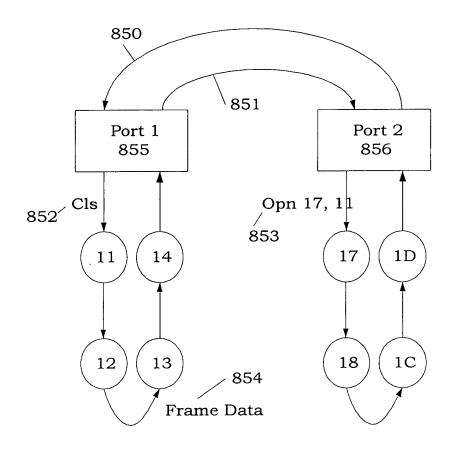


Fig 12a



Open forwarded to Port 2.

Data transferred.

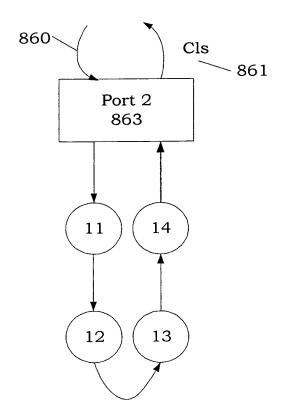
Close sourced.

Open received from Port 1.

Data received.

Close forwarded.

Fig 12b



Close detected at transmillter and receiver.
Connection broken.

Fig 12c

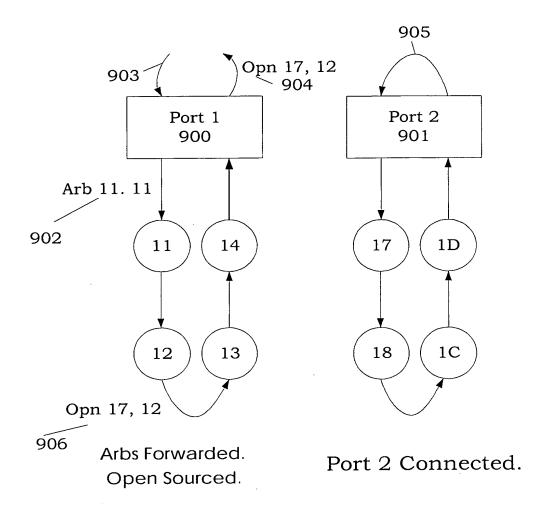
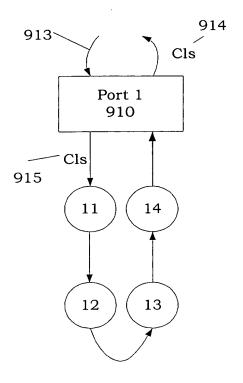
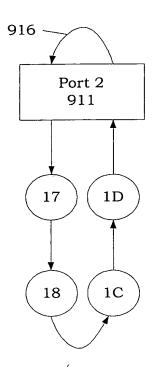


Fig 13a

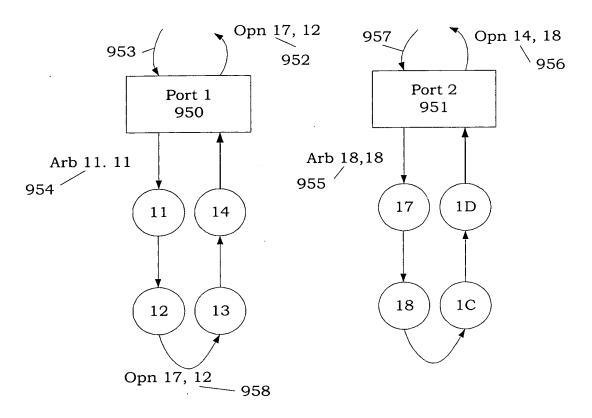




Cls detected at port receiver from node 12.
Cls sourced from port transmitter.

Port 2 still connected.

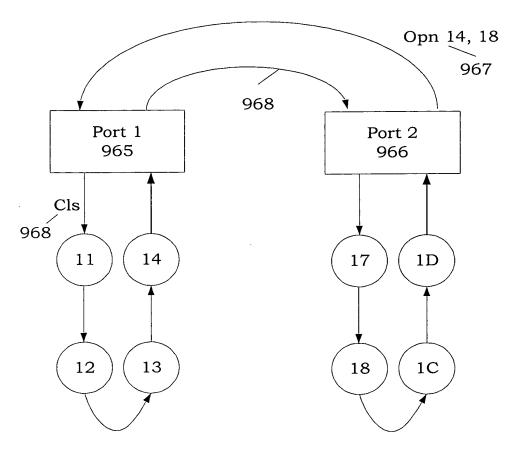
Fig 13b



Arbs forwarded.
Open sourced.

Arbs forwarded.
Open sourced.

Fig 14a

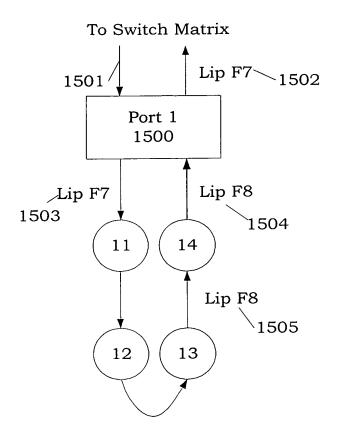


Port 1 connected as destination port.
Cls sourced from Port 1 transmitter.

Port 2 connected as source Port. Open sourced from Port 2 receiver.

Fig 14b

Router detects Lip RX'd signal. Router deasserts switched mode signal.



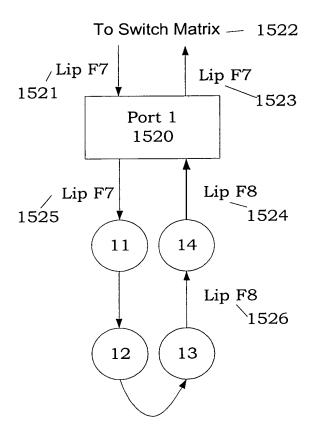
Lip F8 sourced by node 13.

Lip F8 replaced by Lip F7 at port receiver.

Lip F7 sourced at port transmitter.

Fig 15a

Router detects deassertion of port active. Router takes port out of operational loop.

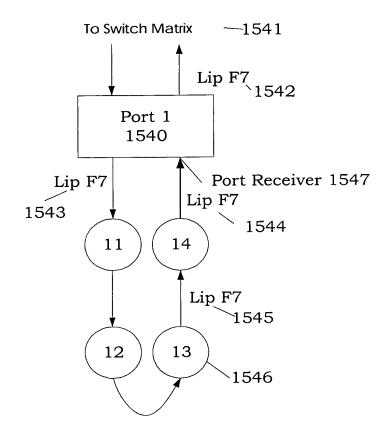


Lip F7 received at port transmitter. Port deasserts port active signal.

Fig 15b

Router detects Lip RX'd signal since port active is now asserted.

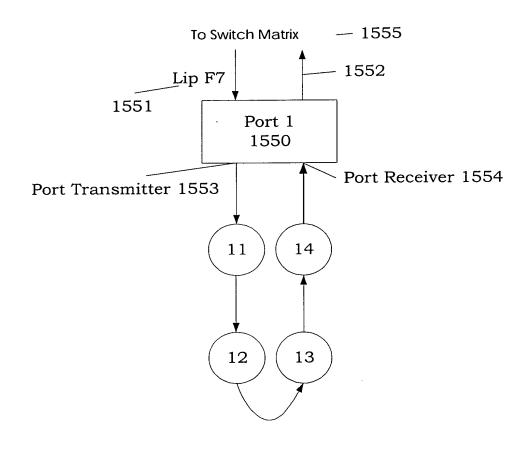
Router puts port back into the operaional loop.



Node 13 "heals", source Lip F7. Lip F7 received at port receiver. Port asserts Port_Active.

Fig 15c

Router continues with loop initialization



Port detects Lip F7 at port transmitter.
Port stops sourcing Lip F7 at port receiver.
Port stops sourcing Lip F7 at port transmitter.

Fig 15d

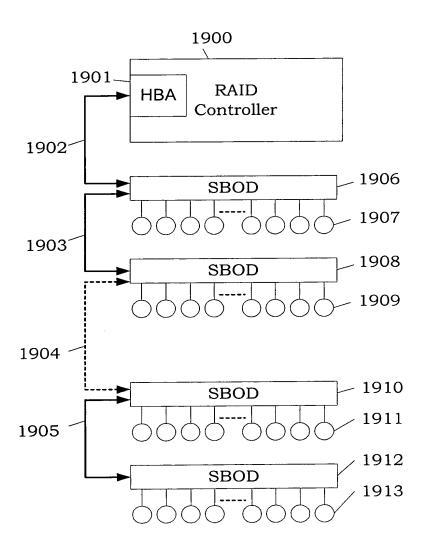


Fig. 16a

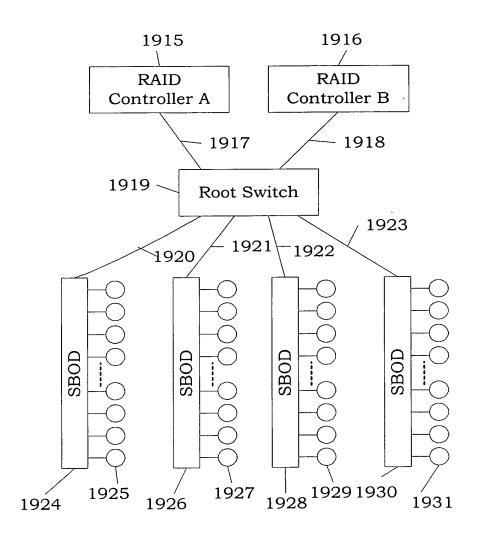


Fig. 16b

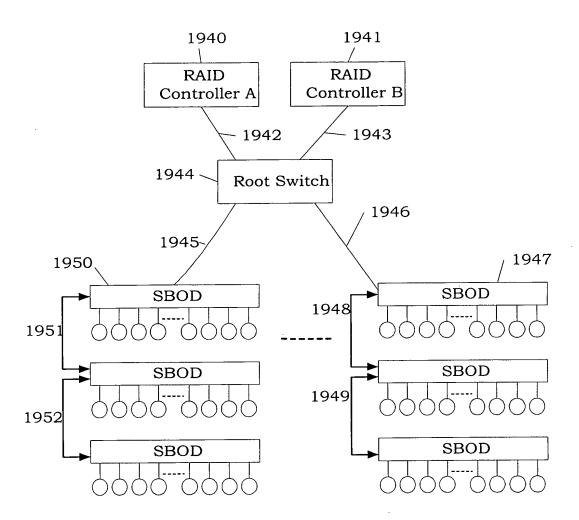


Fig. 16c

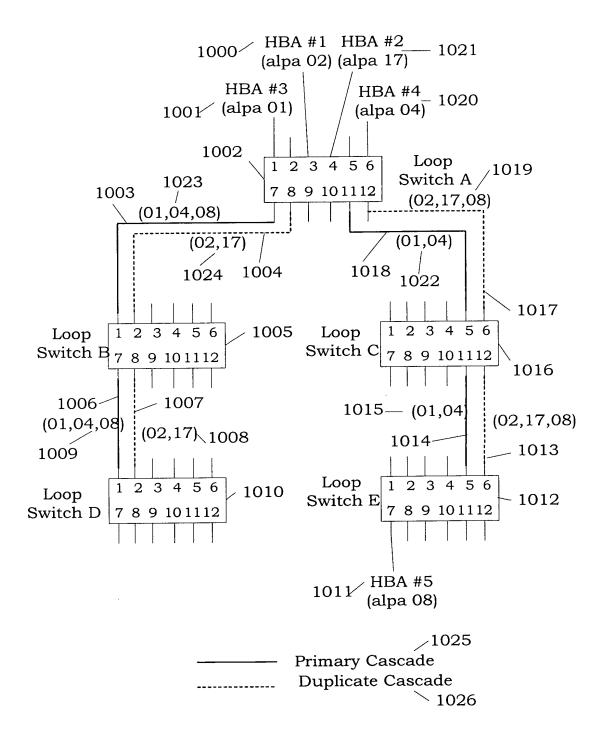


Fig. 17

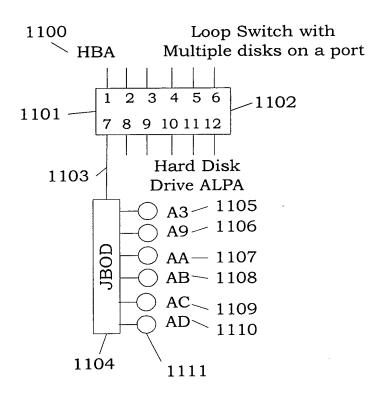
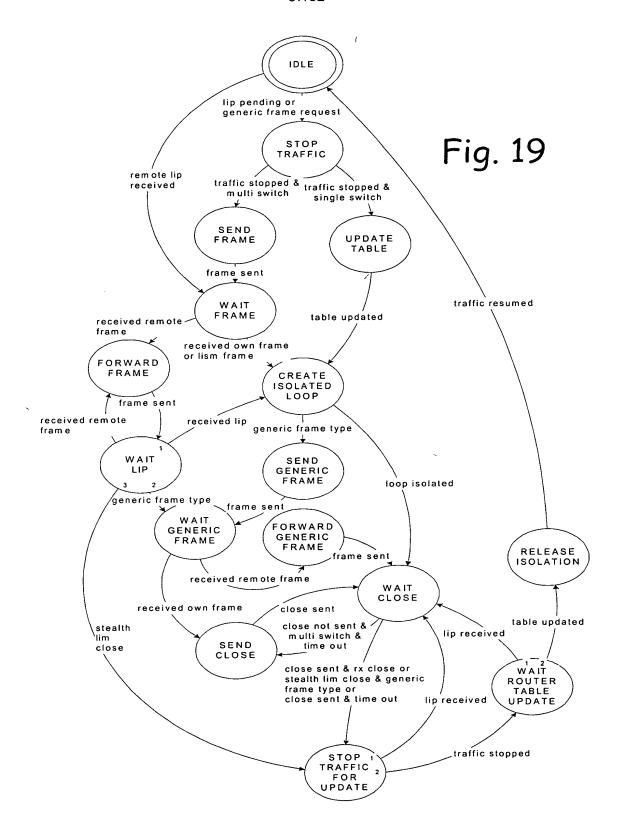
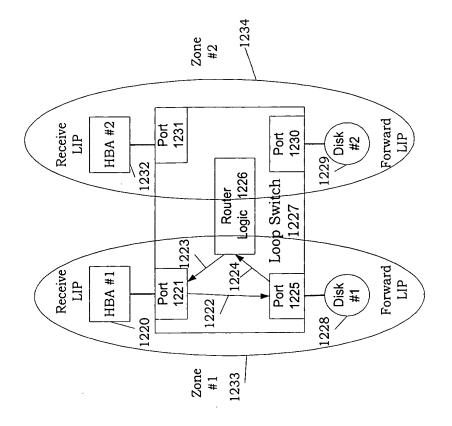


Fig. 18





Port 1213

Loop Switch 1202

Port 1212

Router Logic 1208

1209 | HBA #2

1200 | HBA #1

Port 1210

1207

Port 1211 $|1201|_{1203}$

Receive LIP

Receive LIP

Fig. 20

Forward LIP

Forward LIP

Disk #2

1205 /

Disk

1204

Fig. 21

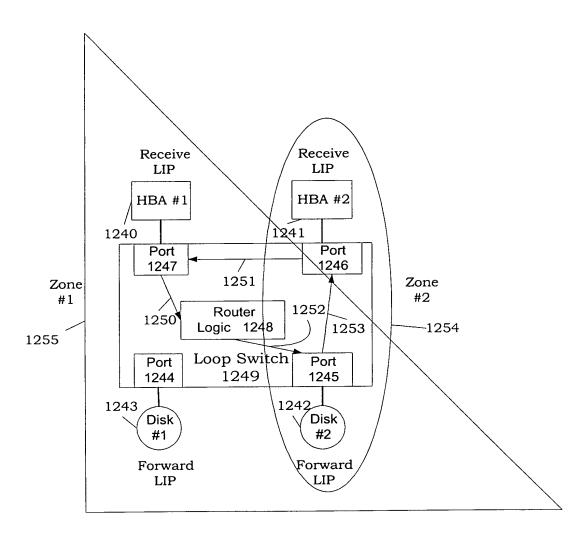


Fig. 22

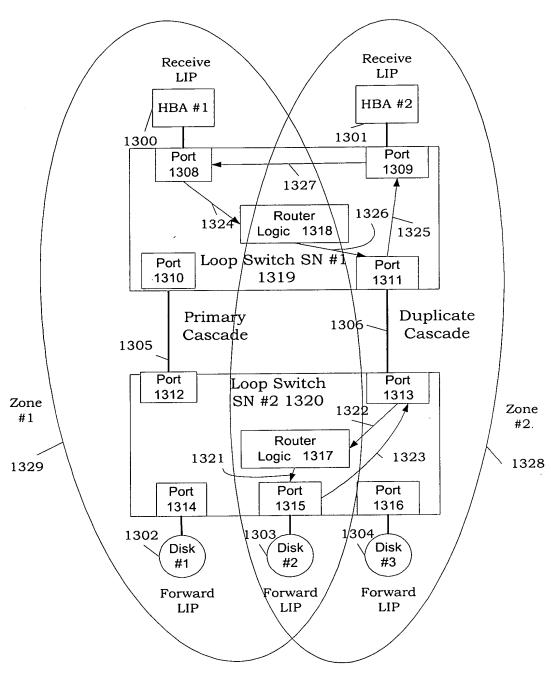


Fig. 23

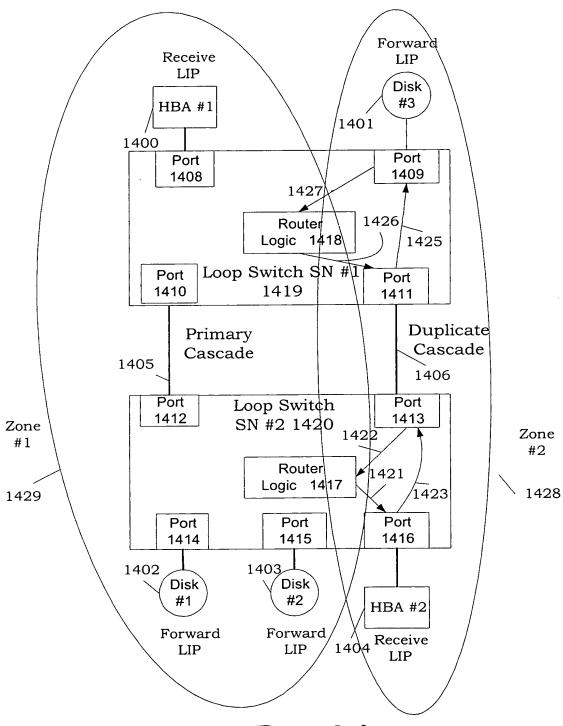


Fig. 24

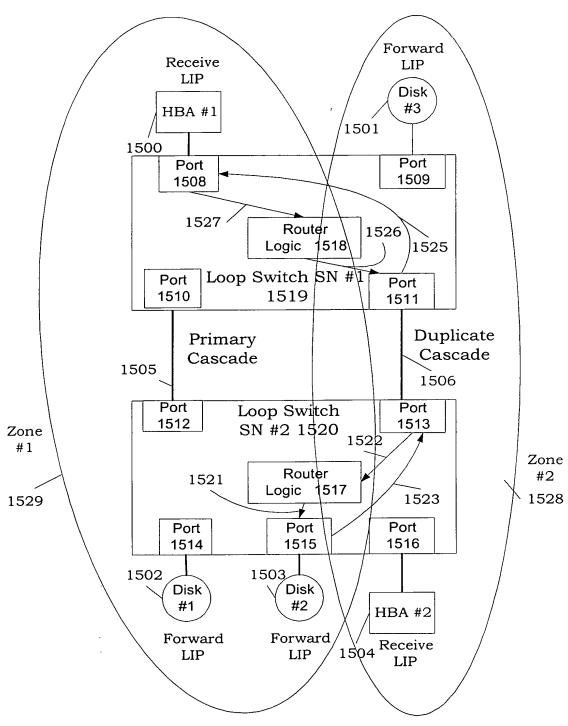


Fig. 25

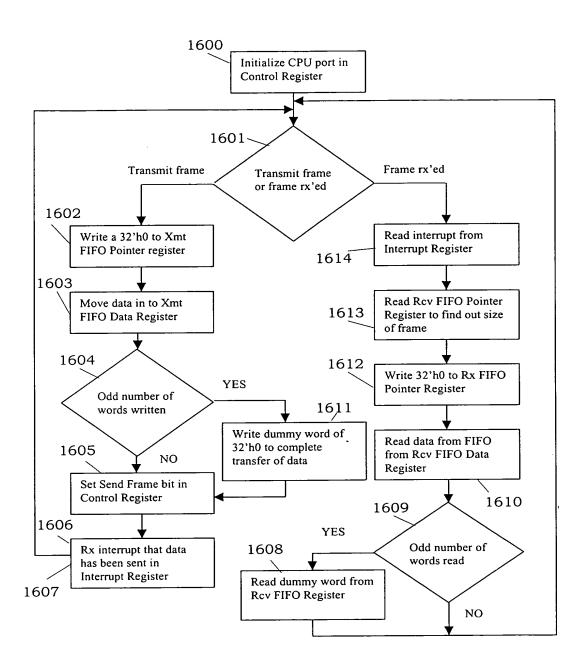


Fig. 26

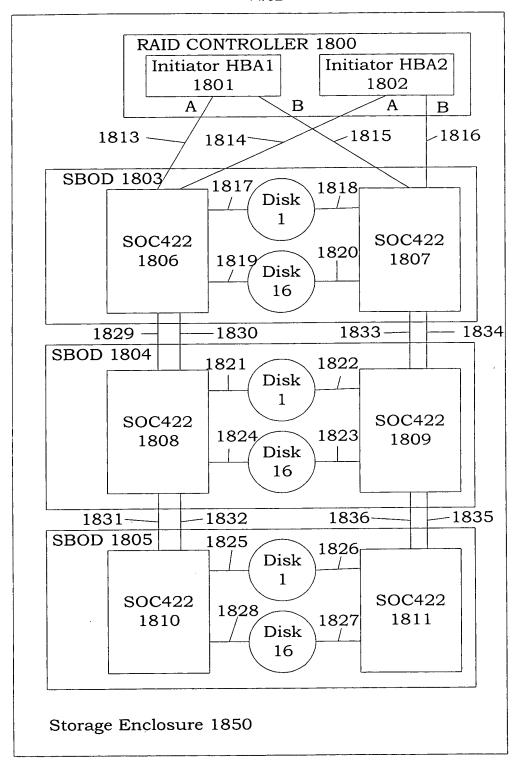


Fig. 27

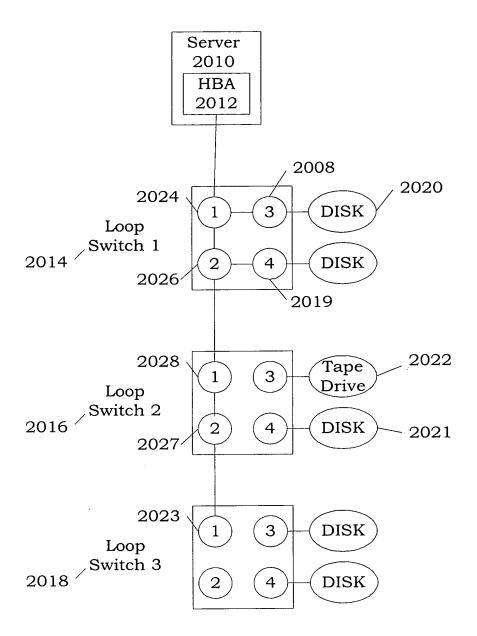


Fig. 28

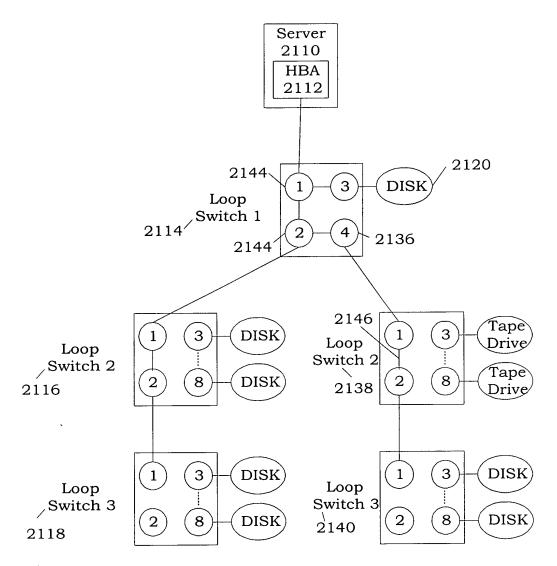


Fig. 29

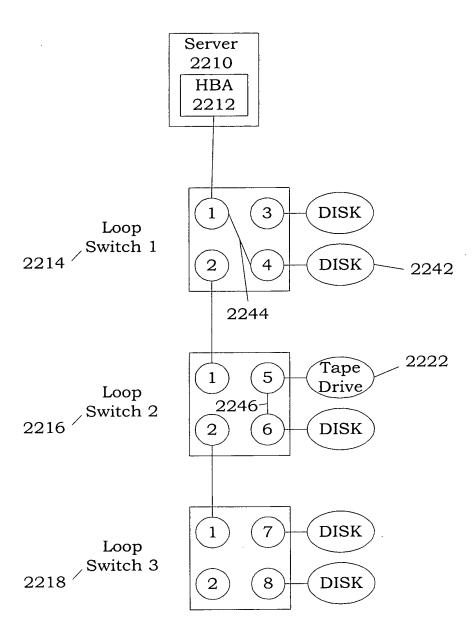


Fig. 30

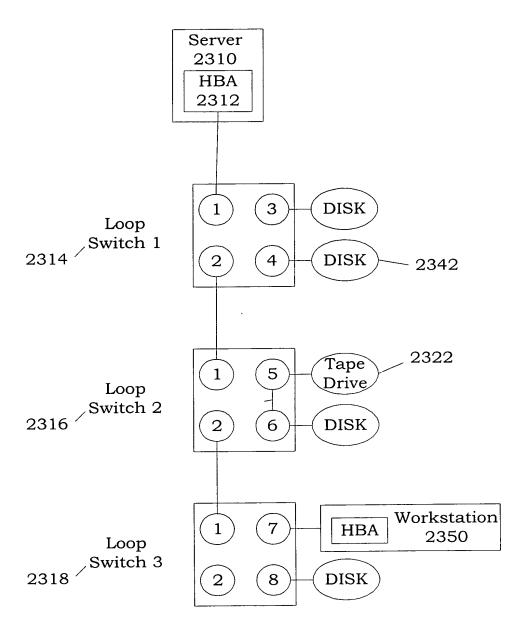


Fig. 31

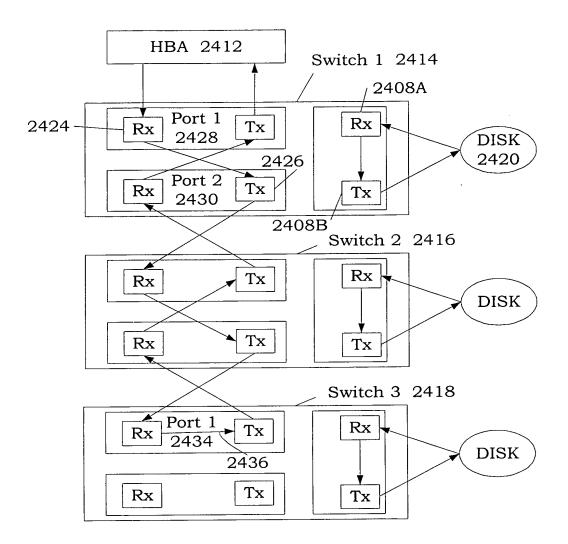


Fig. 32

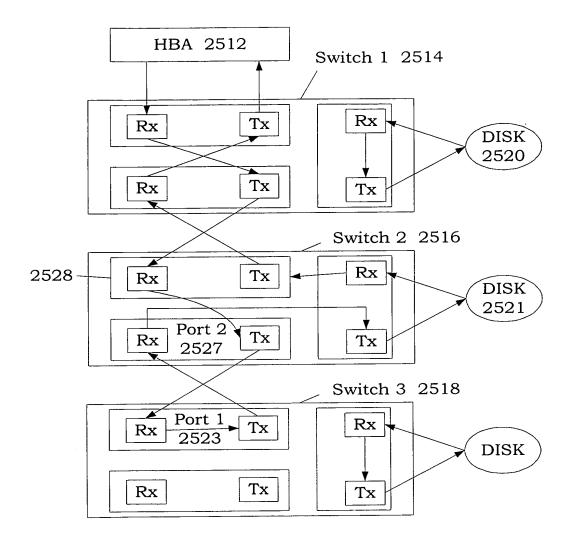


Fig. 33